KAISER CENTER
(Kaiser Roof Garden)
300 Lakeside Drive
Oakland
Alameda County
California

HALS CA-3
CA-3

PHOTOGRAPHS

FIELD RECORDS

HISTORIC AMERICAN LANDSCAPES SURVEY
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

ADDENDUM TO:
KAISER CENTER
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WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

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KAISER ROOF GARDEN

HALS NO. CA-3

Location: 300 Lakeside Drive, Oakland, Alameda County, CA
Lat: 37.80919 Long: -122.26299

Significance: First private roof garden built after WWII, largest continuous roof garden in the world in 1960; first major example of post-war modernism on a rooftop; technological innovations in roof garden design inspired future public and private roof gardens.

History: Industrialist and father of modern shipbuilding nationwide, Henry J. Kaiser, envisioned a grand six million square foot complex on Lake Merritt in Oakland, California, with the Kaiser Center as its focus. Completed in 1960, at that time, the 976,000 square foot building was the largest office building, west of Chicago. Although his vision was never fully realized, the building is a prominent business address. The original plans for the building did not include a roof garden, but the idea was conceived by Edgar Kaiser, Sr., Henry's son, head of Kaiser Inc. who wanted a garden because he had worked in offices in New York that overlooked the Rockefeller Center gardens. Theodore Osmundson was commissioned to create a semi-public park, open to the general public but controlled by Kaiser. In March 2003, Summit Commercial Properties acquired the 28-story tower and the right to build an additional 1.5 million square feet, for $100 million, from majority owner Kaiser Aluminum and Chemical, a subsidiary of Kaiser Center, Inc., and several other investors.

Landscape architects Theodore Osmundson, John Staley, and David Arbegast designed the three and a half acre roof garden spread across the roof of a 15-story garage. Considered a technological accomplishment when it opened in 1960, the garden featured a 200-foot reflecting pond, expansive lawn, and 42 specimen trees along a winding pathway using innovative construction materials, drainage and irrigation design. At the time, technical information about roof gardens was scarce and post-war roof gardens were a novelty that their ultimate success or failure was still unknown. Although 90% of the land at Kaiser Center is covered by buildings, 60% of that same area is covered with plantings. The cost to build the entire roof garden in 1960 was $260,000 or $2 per square foot.

The roof's structural slab dictated the garden's load limitations. An adapted soil mix of 75% crushed lava rock mixed with expanded shale, and 25% peat moss, saw dust or ground bark allowed water through, retained some moisture, and kept soil out. All paving and structures were built of lightweight concrete and decorative boulders are lightweight pumice stone. Weighing roughly 6,000 pounds each, all 42 specimen trees were located squarely over support columns

which could support up to 15,000 pounds. Trees were left in their plank boxes to form subsurface bracing, eliminating the need for visible guying. All trees and shrub species were selected for their fibrous root systems, rather than tap roots which could clog drains.

Welton Becket and Associates, a prominent architect of the 1950s-1960s, designed the building and the roof's drainage system with a structural roof slab made of 28-foot square panels, each sloped with its centered drain located where a supporting column was placed. The slab was waterproofed with built-up tar and covered with a 3-4 inch protective concrete slab sloped to the drains.

To prevent the soil from washing away, a filter barrier was crucial. Since polypropylene filter fabric would not be developed until the late 1960s, rice straw was sandwiched between the soil and drain rock and allowed water to flow and temporarily prevented soil from entering the drains. An early effort at filter fabric, the rice straw eventually decomposed but not before the soil had settled.

Sources:

Covina, Gina "Raise High the Roof Garden," Express, March 31, 2000.

Ginsberg, Steve, "Winner: Kaiser Center, Oakland", San Francisco Business Times, March 26, 2004, http://www.bizjournals.com/sanfrancisco/stories/2004/03/29/focus9.html

Levy, Dan, "Oakland's Landmark Kaiser Center is sold", San Francisco Chronicle, March 19, 2003, http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2003/03/19/BU81480.DTL

Osmundson, Theodore, Roof Gardens: History, Design and Construction, 1999, pages 92-95, 171-172, 186-189.

Prentice, Helaine Kaplan, ed. Site and Insight: Exploring Notable Bay Area Landscape Architecture, "Kaiser Center Roof Garden, The Last Urban Frontier" BY Havers Kiers, UC Berkeley College of Environmental Design, 2002.

Strasburg, Jenny, "Gardens in the Sky" San Francisco Chronicle, December 5, 1999, p. D-1.

Future Research Recommendations:

- Theodore Osmundson collection at the University of California at Berkeley College of Environmental Design, Environmental Design Archives, 280 Wurster Hall.
- Interview with Theodore Osmundson
- Henry J. Kaiser collection at the University of California at Berkeley, Bancroft Library.

• Tachen, Angelika, ed. Hundertwasser Architecture: For a More Human Architecture in Harmony with Nature, New York, Taschen, 1

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Figure 1. Overview on Kaiser roof garden planting beds and pool (Tom Fox, SWA Group).

Figure 2. Custom designed concrete benches, pool and roof plantings (Tom Fox, SWA Group).